

### **REMARKS**

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

#### **Disposition of the Claims**

Claims 1-30 were pending in the application. Claims 8-12 and 24-29 are canceled by way of this submission without prejudice or disclaimer. Accordingly, claims 1-7, 13-23, and 30 are currently pending in the application. Claims 1, 13, 20, and 30 are independent. The remaining claims depend, directly or indirectly, from independent claims 1, 13, 20, and 30.

#### **Drawings**

Applicant appreciates that the Examiner indicated that the drawings filed on July 2, 2009 (including the corrected drawing for Figure 3) are accepted.

#### **Examiner Interview**

Applicant thanks the Examiner for courtesies extended during the Examiner Interview conducted February 3, 2010. During the Interview, Applicant and the Examiner discussed the subject matter of the invention, as well as the Examiner's rejections under 35 U.S.C. § 112, second paragraph, and 35 U.S.C. § 103. The Examiner agreed that the amendments proposed during that interview would overcome the current rejections under § 112 and § 103. Applicant has reviewed the Interview Summary submitted by the Examiner dated February 9, 2010, and agrees with its contents.

**Amendments to the Claims**

Claims 1, 13, 20, and 30 are amended by way of this submission to clarify aspects of the invention. No new subject matter is added by way of these amendments. Support for these amendments may be found, for example, in paragraph [0022], FIG. 3, and the originally filed claims.

**Rejection under 35 U.S.C. § 112**

Claims 8-12 and 24-29 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As discussed above, claims 8-12 and 24-29 are canceled by way of this submission. Accordingly, the rejection as applied to now-canceled claims 8-12 and 24-29 is moot, and withdrawal is respectfully requested.

Claims 1-30 stand rejected under 35 U.S.C. § 112, second paragraph, as failing to set forth the subject matter which Applicant regards as their invention. Specifically, the Examiner contends there is no association between the encrypted hash data and the user key in the claims. Claims 1, 13, 20, and 30 are amended by way of this submission, and now include the omitted limitations associating the encrypted hash data and the user key. Further, these amendments were discussed in the Examiner Interview of February 3, 2010, and the Examiner agreed that the amendments overcome the Examiner's rejection under 35 U.S.C. § 112. Accordingly, withdrawal of the rejection is respectfully requested.

**Rejection under 35 U.S.C. § 103**

Claims 1-4, 13, 14, 15, 19-23, and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,149,900 (“Rothrock”) in view of U.S. Patent No. 6,490,680 (“Scheidt”), further in view of U.S. Patent No. 6,556,994 (“Zheng”). Claims 5-7 and 16-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rothrock, Scheidt, and Zheng, in further view of U.S. Patent No. 6,253,205 (“Quaranto”). These rejections are respectfully traversed.

MPEP § 2143 states that “[t]he key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. § 103 should be made explicit.” Further, when combining prior art elements, the Examiner “must articulate the following: (1) a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference....” See MPEP § 2143(A); *KSR International Co. v. Teleflex Inc.*, 550 USPQ2d 1385 (2007). Applicant asserts that the Examiner has failed to show sufficient evidence to establish a *prima facie* case of obviousness with respect to the pending claims. Specifically, the Examiner has failed to establish a *prima facie* case of obviousness for at least the following reasons provided below.

Amended independent claim 1 recites, in part, “storing the new encrypted data and the new encrypted symmetric key if a second user has read permission, wherein the second user is allowed access to the private key; applying a hash function to the selected data to obtain hash data; encrypting the hash data with the private key to obtain encrypted hash data; and storing the encrypted hash data, the new encrypted data, and the new encrypted symmetric key if the second

user has write permission.” Amended independent claims 13, 20, and 30 include similar limitations. During the Examiner interview conducted February 3, 2010, the Examiner agreed that the above limitation overcomes the current rejection under 35 U.S.C. § 103(a). This agreement was also reiterated in the Examiner’s Interview Summary dated February 9, 2010. Applicant asserts that Rothrock, Scheidt, Zheng, and Quaranto, either alone or in combination, fail to disclose or otherwise render obvious at least this limitation of the independent claims. Consequently, Rothrock, Scheidt, Zheng, and Quaranto also fail to disclose or render obvious the limitations recited in claims 2-7, 14-19, and 21-23, which depend from amended independent claims 1, 13, and 20. Accordingly, withdrawal of the rejection of claims 1-7, 13-23, and 30 is respectfully requested.

Claims 1-4, 13, 14, 15, 19 - 23, and 30

Amended claim 1 recites, in part, that “the user data access record comprises a bitmap indicating which encrypted data has been accessed by a first user.” Claims 13, 20, and 30 include similar limitations. The Examiner relies on Zheng to disclose this limitation. *See* Office Action dated November 24, 2009, page 6. Specifically, the Examiner asserts that Zheng discloses using user data access records to determine which encrypted data is accessed by a user. Applicant respectfully disagrees.

Zheng is directed toward a bitmap used as a locking table which reflects the *currently* locked data. *See* Zheng, column 5, ll. 23-30. The locking table in Zheng does not maintain any records indicating which data has been accessed by a user, and is, therefore, not equivalent to a user data access record as recited in amended claims 1, 13, 20, and 30. Further, no other elements, or combination of elements, in Zheng, Rothrock, and Scheidt disclose or otherwise render obvious a user data access record as recited in amended claim 1.

Amended claim 1 also recites, in part, “re-encrypting the selected data using a second symmetric key to obtain new encrypted data; ...[and] encrypting the second symmetric key using the public key to obtain a new encrypted symmetric key.” Amended independent claims 13, 20, and 30 include similar limitations. The Examiner relies on FIGs. 1 and 2, and columns 16 and 17 in Scheidt to teach this limitation. *See* Office Action dated November 24, 2009, page 8. Specifically, the Examiner has equated the “working split” in Scheidt to the “symmetric key” in the above cited limitation of claim 1. Although the “working split” in Scheidt is used in the encryption of an object, the “working split” is not, itself encrypted. The “working split” in Scheidt is constructed or reconstructed from user options and credentials, and is used for encrypting one object. *See* Scheidt, column 16, ll. 46-50. Scheidt fails to disclose constructing the “working split” without the use of user credentials, and therefore does not disclose encrypting a “symmetric key” using a public key. Further, the constructing and reconstructing of the “working split” disclosed in Scheidt is not equivalent to encrypting and decrypting using an asymmetric key, and therefore Scheidt fails to disclose using a public key to encrypt a “symmetric key”, as recited in claim 1. Although not relied on by the Examiner, Rothrock and Zheng also fail to disclose or render obvious the above cited claim.

Finally, amended claim 1 recites, in part, “storing the new encrypted data and the new encrypted symmetric key.” Amended independent claims 13, 20, and 30 include similar limitations. The Examiner again relies on Scheidt to disclose this limitation. *See* Office Action dated November 24, 2009, page 8. The encrypted data block in Scheidt, however, merely includes encrypted data and an encrypted header. *See* Scheidt, Figure 1. The encrypted data is decrypted using a credentials file that is used in the creation and recreation of a session key. *See* Scheidt, column 4, ll. 51-54.

The session key is not stored, and may not be derived from the stored file. *See id.* Therefore, Scheidt fails to disclose storing the “new encrypted symmetric key,” as recited in the claims. Although not relied on by the Examiner, Rothrock and Zheng also fail to disclose or render obvious the above cited claim.

In view of the above, it is clear that amended independent claims 1, 13, 20, and 30 are patentable over the cited art. Therefore, claims 2-4, 14, 15, 19, and 21-23, which depend from claims 1, 13, 20, and 30, are patentable for at least the same reasons. Accordingly, withdrawal of the rejection of claims 1-4, 13, 14, 15, 19 - 23, and 30 is respectfully requested.

#### Claims 5-7 and 16-18

Claims 5-7 and 16-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rothrock and Scheidt, and further in view of Quarato. This rejection is also respectfully traversed. As described above, Rothrock, Scheidt, and Zheng fail to disclose or render obvious the limitations of amended independent claims 1 and 13. Further, Quarato fails to disclose or otherwise provide that which Rothrock and Scheidt lack. Specifically, Quarato fails to disclose or otherwise render obvious at least the limitations of claims 1 and 13 recited above. Claims 5-7 and 16-18, which depend from claims 1 and 13, contain the same patentable material as claims 1 and 13, and are therefore patentable over the cited art for the same reasons provided above. Accordingly, withdrawal of the rejection of claims 5-7 and 16-18 is respectfully requested.

#### Claims 8-12 and 24-29

Claims 8-12 and 24-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rothrock, Scheidt, and Zheng, further in view of U.S. Patent No. 7,324,644 (“Saito”). As discussed

above, claims 8-12 and 24-29 are canceled by way of this submission. Accordingly, the rejection of now-canceled claims 8-12 and 24-29 is now moot, and withdrawal is respectfully requested.

**Conclusion**

Applicant believes this submission is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 33226/296001).

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Respectfully submitted,

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